The effects of satay marination on three beef muscle types

Abstract

The effects of marination on the weight gain, cooking loss and Warner-Bratzler shear force of three beef muscle types, i.e. blade roast (BR), biceps femoris (BF) and semitendinosus (ST) were investigated by treating them in distilled water (as control), brine solution, tamarind juice, tamarind juice plus salt and satay marinade for 180 minutes. The weight gain of ST muscles were significantly higher ($P < 0.01$) than the BR muscles in brine solution, tamarind juice plus salt and satay marinade, while ST and BF muscles did not differ significantly ($P > 0.01$) in all the five treatments. For cooking loss, muscle types did not show a significant difference ($P > 0.01$) in all marinating treatments except for BR and ST muscles in tamarind juice ($P = 0.00023$). The presence of salt in tamarind juice gave better results in tenderising ST muscles than using tamarind juice alone.

Keyword: Satay marinade; Blade roast; Biceps femoris ; Semitendinosus ; Muscle types; Weight gain; Cooking loss; WBSF value; Connective tissue